

## AMENDMENTS TO THE CLAIMS

Please cancel claim 22 without prejudice or disclaimer to the subject matter therein.

Please add new claims 46-49 as follows. Please amend claims 23, 24, 26-32, 34 - 36, 38, 39, and 43 as follows.

1-22. (Canceled)

23. (Currently Amended) ~~The A~~ coherent light source, ~~according to Claim 22,~~ comprising:  
a wide stripe semiconductor laser capable of exciting a plurality of lateral modes;  
a mode converter for beam shaping therein, light emitted from the semiconductor laser;  
a single-mode waveguide to which the light from the semiconductor laser is coupled  
through the mode converter; and  
a wavelength selecting filter through which light exiting an end face of the single-mode  
waveguide passes, and through which a portion of the light transmitted by the single-mode  
waveguide is fed back to an active layer of the semiconductor laser using a same exit path,  
wherein an oscillation mode of the semiconductor laser is limited by the light that has  
been fed back, so that the semiconductor laser oscillates in a generally single longitudinal mode  
and a generally single lateral mode, and  
wherein ~~part~~ the portion of the light coupled to the single-mode waveguide is also  
reflected at the ~~exit~~-end face of the single-mode waveguide, and fed back to the active layer of  
the semiconductor laser.

24. (Currently Amended) ~~The A~~ coherent light source, ~~according to Claim 22,~~ comprising:  
a wide stripe semiconductor laser capable of exciting a plurality of lateral modes;  
a mode converter for beam shaping therein, light emitted from the semiconductor laser;  
a single-mode waveguide to which the light from the semiconductor laser is coupled  
through the mode converter; and

a wavelength selecting filter through which light exiting an end face of the single-mode waveguide passes, and through which a portion of the light transmitted by the single-mode waveguide is fed back to an active layer of the semiconductor laser using a same exit path,

wherein an oscillation mode of the semiconductor laser is limited by the light that has been fed back, so that the semiconductor laser oscillates in a generally single longitudinal mode and a generally single lateral mode, and

wherein the wavelength selecting filter includes a band pass filter and a reflector, and the light that has been transmitted by the single-mode waveguide goes-passes through the band pass filter, and then part-of-it the portion of the light that has been fed back through the wavelength selecting filter is reflected by the reflector and fed back to the active layer of the semiconductor laser.

25. (Previously Presented) The coherent light source according to Claim 24, wherein the band pass filter and the reflector are formed integrally with the single-mode waveguide as a Bragg reflection grating.

26. (Currently Amended) The coherent light source according to Claim 2223, wherein the wavelength selecting filter is ~~constituted by~~ a volume grating.

27. (Currently Amended) The coherent light source according to Claim 2223, wherein the wavelength selecting filter is a fiber grating.

28. (Currently Amended) The coherent light source according to Claim 2223, wherein the wavelength selecting filter is formed integrally with the semiconductor laser as a Bragg reflection grating.

29. (Currently Amended) The coherent light source according to Claim 2223, wherein the mode converter is a tapered waveguide.

30. (Currently Amended) The coherent light source according to Claim 22~~23~~, wherein the mode converter is a tapered fiber.

31. (Currently Amended) ~~The~~ A coherent light source, ~~according to Claim 22,~~ comprising:  
a wide stripe semiconductor laser capable of exciting a plurality of lateral modes;  
a single-mode waveguide to which light exiting the semiconductor laser is coupled, and  
having a periodic polarization inversion structure; and  
a wavelength selecting filter through which the light exiting an end face of the single-  
mode waveguide passes, and through which a portion of the light transmitted by the single-mode  
waveguide is fed back to an active layer of the semiconductor laser using a same exit path,  
wherein the oscillation mode of the semiconductor laser is limited by the light that has  
been fed back, so that the semiconductor laser oscillates in a generally single longitudinal mode  
and a generally single lateral mode, and  
wherein the single-mode waveguide has a periodic polarization inversion structure, and  
part the portion of the light that passes from the semiconductor laser through the single-mode  
waveguide is subjected to wavelength conversion by the polarization inversion structure.

32. (Currently amended) ~~The~~ A coherent light source, ~~according to Claim 29,~~ comprising:  
a wide stripe semiconductor laser capable of exciting a plurality of lateral modes;  
a tapered waveguide having an incident end face to which light exiting from the  
semiconductor laser is coupled;  
a single-mode waveguide formed on the exit-end face side of the tapered waveguide;  
a band pass filter that transmits through which part a portion of the light from transmitted  
by the single-mode waveguide passes; and  
a reflector that reflects the light transmitted by through the band pass filter and feeds this  
the portion of the light back to the an active layer of the semiconductor laser using a same exit  
path,

wherein the oscillation mode of the semiconductor laser is limited by the light that has been fed back, so that the semiconductor laser oscillates in a generally single longitudinal mode and a generally single lateral mode.

33. (Previously presented) The coherent light source according to Claim 32, wherein the band pass filter is formed integrally with the single-mode waveguide as a Bragg reflection grating.

34. (Currently Amended) The coherent light source according to Claim 32, wherein the single-mode waveguide is composed of a nonlinear optical material and has a periodic polarization inversion structure, and

~~part~~ a portion of the light from the semiconductor laser is subjected to wavelength conversion by the polarization inversion structure.

35. (Currently Amended) A coherent light source, comprising:

a wide stripe semiconductor laser capable of exciting a plurality of lateral modes, including a Bragg reflection grating;

a tapered waveguide having an incident end face to which light exiting from the semiconductor laser is coupled;

a single-mode waveguide formed on the ~~exit-end face side~~ of the tapered waveguide; and

a reflector that reflects ~~part~~ a portion of the light transmitted from the single-mode waveguide and feeds ~~this-the portion of the~~ light back to ~~the~~ an active layer of the semiconductor laser using a same exit path,

wherein the oscillation mode of the semiconductor laser is limited by the light that has been fed back, so that the semiconductor laser oscillates in a generally single longitudinal mode and a generally single lateral mode.

36. (Currently Amended) The coherent light source according to Claim 35, wherein the single-mode waveguide is composed of a nonlinear optical material and has a periodic polarization inversion structure, and

~~part~~ a portion of the light from the semiconductor laser is subjected to wavelength conversion by the polarization inversion structure.

37. (Previously presented) The coherent light source according to Claim 35, wherein the exit end face of the single-mode waveguide has a dichroic mirror that transmits fundamental waves and transmits higher harmonic waves.

38. (Currently amended) The coherent light source according to Claim ~~2223~~, wherein the lateral mode of the semiconductor laser is substantially fixed to single-mode oscillation by feedback light.

39. (Currently amended) An optical device, having an image conversion optical system and the coherent light source according to Claim ~~2223~~, wherein the light from the coherent light source is converted by the optical system into a two-dimensional image.

40. (Previously presented) The optical device according to Claim 39, wherein the image conversion optical system has a two-dimensional beam scanning optical system.

41. (Previously presented) The optical device according to Claim 39, wherein the image conversion optical system has a two-dimensional switch.

42. (Previously presented) The coherent light source according to Claim 35, wherein the lateral mode of the semiconductor laser is substantially fixed to single-mode oscillation by feedback light.

43. (Currently Amended) An optical device, having an image conversion optical system and the coherent light source according to Claim 35, wherein the light from the coherent light source is converted by the optical system into a two-dimensional image.
44. (Previously presented) The optical device according to Claim 43, wherein the image conversion optical system has a two-dimensional beam scanning optical system.
45. (Previously presented) The optical device according to Claim 43, wherein the image conversion optical system has a two-dimensional switch.
46. (New) The coherent light source according to Claim 32, wherein the lateral mode of the semiconductor laser is substantially fixed to single-mode oscillation by feedback light.
47. (New) An optical device, having an image conversion optical system and the coherent light source according to Claim 32, wherein the light from the coherent light source is converted by the optical system into a two-dimensional image.
48. (New) The optical device according to Claim 47, wherein the image conversion optical system has a two-dimensional beam scanning optical system.
49. (New) The optical device according to Claim 47, wherein the image conversion optical system has a two-dimensional switch.